

FLOOD INSURANCE STUDY



DADE COUNTY, GEORGIA AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
TRENTON, CITY OF	130063
UNINCORPORATED AREAS	130246



MAY 17, 1989



Federal Emergency Management Agency

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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FLOOD INSURANCE STUDY
DADE COUNTY, GEORGIA
AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the geographic area of Dade County, Georgia, including the City of Trenton and the unincorporated areas of Dade County (hereinafter referred to collectively as Dade County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

This Flood Insurance Study revises and supersedes a previous Flood Insurance Study for the City of Trenton, Georgia (Reference 1). This information will be used by the community to update existing floodplain regulations as part of the regular phase of the National Flood Insurance Program. The information will also be used by local and regional planners to further promote sound land use and floodplain development.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

This Flood Insurance Study was prepared by compiling existing hydrologic and hydraulic technical and scientific data prepared by the Federal Emergency Management Agency (FEMA) for purposes of the National Flood Insurance Program and by other organizations for purposes other than the National Flood Insurance Program. The data were identified as applicable at the time of compilation of this Flood Insurance Study and should depict the general conditions of the flooding sources with relative accuracy. FEMA performed a cursory review and accepted the data as valid for purposes of this Flood Insurance Study and the National Flood Insurance Program. However, if better information is known to exist or has been developed since the date of this report, the information should be immediately forwarded to the Natural and Technological Hazards Division, FEMA, Atlanta, Georgia, for consideration for revision of this study.

1.2 Authority and Acknowledgments

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses for this study were obtained from "Floods on Pope and Town Creeks and Tributary #1 to Lookout Creek at Mile 18.91 in Dade County and Trenton, Georgia" (Reference 2).

1.3 Coordination

On May 24, 1988, the results of this Flood Insurance Study were reviewed and accepted at a final coordination meeting attended by representatives of the community and FEMA.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the geographic area of Dade County, Georgia. The area of study is shown on the Vicinity Map (Figure 1).

The areas studied by detailed methods were selected based on the extent and validity of available existing hydrologic and hydraulic data.

Flooding caused by overflow of Town Creek, Tributary No. 1, Lookout Creek, Pope Creek, and Nickajack Lake was studied in detail within the county.

Approximate methods of analysis were used to study all remaining areas having a potential flood hazard that did not have detailed scientific or technical data available.

2.2 Community Description

Dade County is located in the northwestern corner of Georgia. It is bordered by the unincorporated areas of Marion and Hamilton Counties, Tennessee, on the north; Jackson and Dekalb Counties, Alabama, on the west; and Walker County, Georgia, on the east. The largest city in Dade County is the City of Trenton, the county seat, located in the central part of the county 15 miles from Chattanooga, Tennessee. Trenton is served by State Routes 58, 143, and 406, U.S. Route 11, Interstate 59, and the Norfolk Southern Railway. The 1980 population of Dade County was reported to be 12,318, a 24-percent increase from the 1970 population of 9,910 (Reference 3).

The City of Trenton lies in the Tennessee Valley close to the center of the Lookout Creek watershed, which is about 34 miles long and ranges from 4 to 8 miles in width. The mouth of Lookout Creek is at Moccasin Bend on the Tennessee River. The creek flows in a northeasterly direction to Nickajack Reservoir on the Tennessee River. The watershed is bounded on the east by Lookout Mountain, which rises about 1,500 feet above the valley

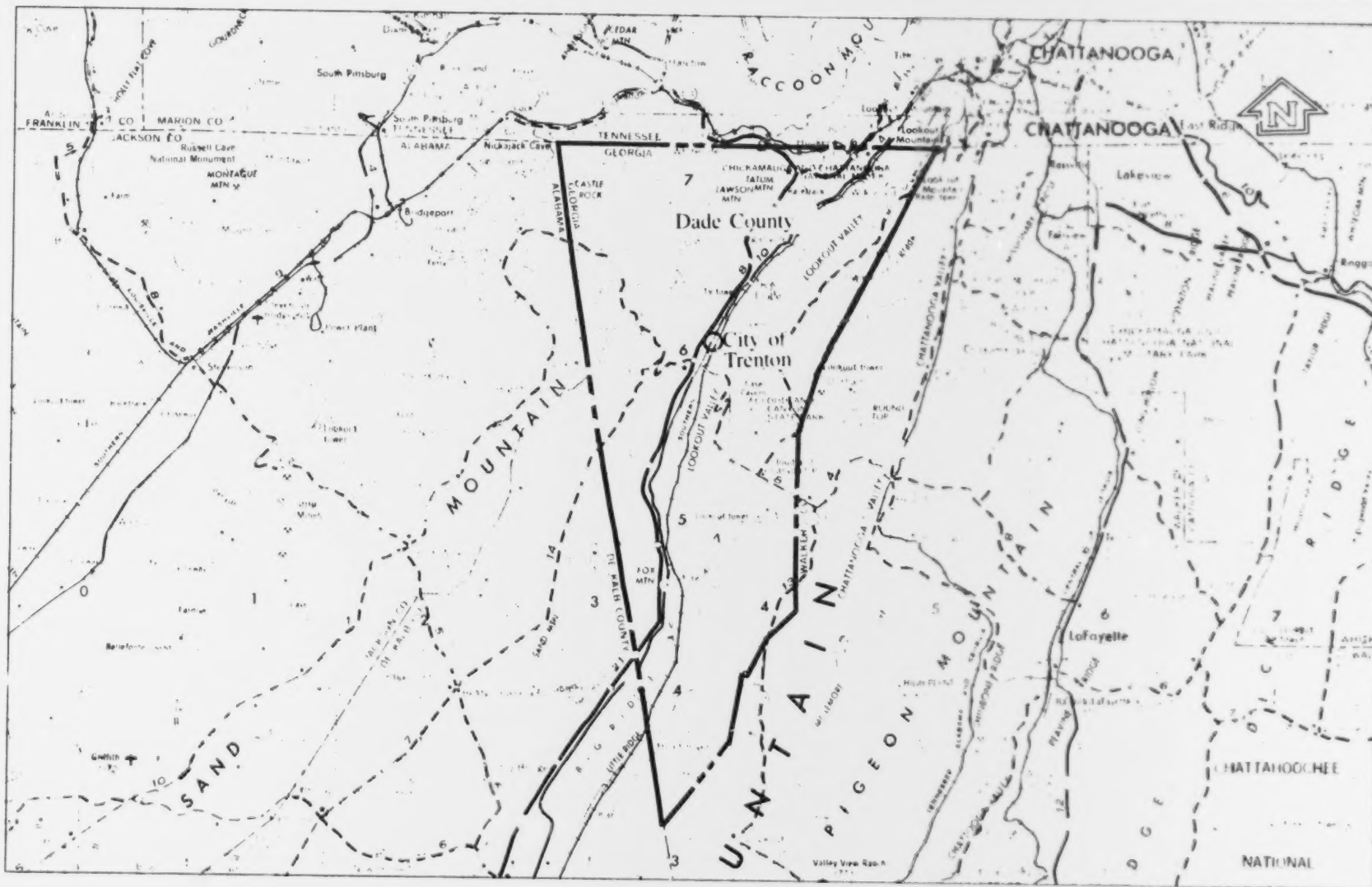


FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

**DADE COUNTY, GA
AND INCORPORATED AREAS**

APPROXIMATE SCALE



VICINITY MAP

floor. The watershed is bounded on the west by several ridges in the broad and much less prominent Sand Mountain range. The headwaters of the watershed extend southwestward into northeast Alabama. The watershed is also bounded by the Tennessee Valley Divide, where Lookout Mountain broadens and the valley floor rises to within 900 feet of Lookout Mountain and 450 feet of Sand Mountain. Elevations of the watershed range from 634 feet National Geodetic Vertical Datum of 1929 (NGVD) at the mouth of Lookout Creek to 2,287 feet NGVD along the Lookout Mountain side of the valley.

2.3 Principal Flood Problems

High-water marks from Lookout Creek flooding at the mouths of the three streams studied are available for the February 1969 and March 1973 floods. An additional high-water mark from the April 1920 flood on Lookout Creek is available at the mouth of Tributary No. 1.

Information about past flooding on Pope, Town, and Lookout Creeks is limited to a series of high-water marks obtained following the large August 1982 flood.

Intense rain fell throughout the Trenton area during the early morning of August 17, 1982, resulting in record floods on several area streams including Pope and Town Creeks. The Pope Creek watershed received 10 to 12 inches of rain with the larger amounts falling on Raccoon Mountain near the head of the creek. To the knowledge of the residents contacted, this was the first occurrence of a damaging flood on Pope Creek during the approximately 20 years they had lived in the area. The Town Creek watershed received 4 to 7 inches of rain that produced out-of-banks stages along the creek.

On Pope Creek, the 1982 flood reached an elevation of 732.2 feet NGVD just downstream of eastbound Interstate 24. On Town Creek, the 1982 flood reached an elevation of 727.8 feet NGVD just downstream of the U.S. Route 11 bridge. No information on past flooding is available on the remaining studied streams.

2.4 Flood Protection Measures

Two dams that exist within the study area, Lake Hills Memorial Gardens Dam on Tributary No. 2, and Dyer Lake Dam on Town Creek Tributary, do not provide significant protection of downstream areas.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that is expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly

termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each riverine flooding source studied in detail affecting the community.

Computed flood discharges on Pope Creek, Town Creek, and Tributary No. 1 were developed from analyses of stream gage records for similar watersheds in the region. All stream gage analyses followed standard procedures outlined in "Guidelines for Determining Flood Flow Frequency" (Reference 4). The results of the regional analysis used in this study are supported by the historic information for Pope and Town Creeks.

Both the Lake Hills Memorial Gardens Dam on Tributary No. 2 and the Dyer Lake Dam on Town Creek Tributary can safely pass the 500-year flood without danger of failure due to overtopping. Although these dams could withstand the 500-year flood, dam failure could result from overtopping by a larger flood or other causes not related to floods such as structure deficiencies or a large earthquake. An evaluation of the impact of dam failure during nonflood conditions indicated that the released waters from the Lake Hills Memorial Gardens Dam would exceed the 500-year flood level along Tributary No. 1. The released waters from the Dyer Lake Dam would be less than the 10-year flood level on Town Creek Tributary.

Peak discharge-drainage area relationships for the 10-, 50-, 100-, and 500-year floods of each flooding source studied in detail in the community are shown in Table 1.

TABLE 1 - SUMMARY OF DISCHARGES

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (SQ MILES)</u>	<u>PEAK DISCHARGE (CFS)</u>			
		<u>10-YEAR</u>	<u>50-YEAR</u>	<u>100-YEAR</u>	<u>500-YEAR</u>
POPE CREEK					
just upstream of Pope Creek Road	7.50	1,780	2,760	3,160	4,260
just upstream of U.S. Route 11	5.60	1,470	2,305	2,605	3,540

TABLE 1 - SUMMARY OF DISCHARGES (continued)

at Slygo Road	4.40	1,225	1,940	2,240	3,050
at State Route 299	1.20	505	810	960	1,310
TRIBUTARY NO. 1					
about 0.5 mile upstream of mouth	0.82	375	630	735	1,010
at Norfolk Southern Railway	0.60	300	505	600	825
at Barton Avenue	0.44	235	400	470	640
TOWN CREEK					
at mouth	3.02	960	1,480	1,700	2,300
about 0.5 mile upstream of mouth	2.02	715	1,100	1,300	1,770
at Sunset Drive	1.82	665	1,015	1,210	1,645
just downstream of Price Street	1.73	615	945	1,125	1,535
at Interstate 59	1.40	580	905	1,075	1,455
at Madison Avenue	1.10	535	855	1,020	1,340
LOOKOUT CREEK					
just upstream of confluence of Tributary No. 1	129	9,500	13,300	16,000	19,000
about 0.5 mile downstream of confluence of Town Creek	107	8,300	11,700	13,800	16,800
about 1.0 mile upstream of confluence of Town Creek	102	7,900	11,200	13,200	16,100

The 100-year flood elevation for Nickajack Lake was taken from the Flood Insurance Study for Marion County, Tennessee (Reference 5) and is shown in Table 2.

TABLE 2 - SUMMARY OF ELEVATIONS

<u>FLOODING SOURCE AND LOCATION</u>	<u>PEAK ELEVATION (FEET NGVD) 100-YEAR</u>
NICKAJACK LAKE within the community	635.0

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Cross-section data for the streams were obtained by field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and on the Flood Insurance Rate Map.

Channel roughness coefficients (Manning's "n") used in the hydraulic computations were determined on the basis of field inspection of channel and floodplain areas and coefficients based on known flood profiles. Manning's "n" values for Town Creek ranged from 0.040 to 0.050 for the channel and from 0.060 to 0.140 for the overbanks. Values for Tributary No. 1 ranged from 0.030 to 0.050 for the channel and from 0.050 to 0.120 for the overbanks. Values for Pope Creek ranged from 0.030 to 0.040 for the channel and from 0.060 to 0.140 for the overbanks. Values for Lookout Creek ranged from 0.031 to 0.059 for the channel and from 0.065 to 0.150 for the overbanks.

Starting water-surface elevations for Town Creek, Tributary No. 1, and Pope Creek were computed by the slope-area method. The starting water-surface elevation for Lookout Creek was determined from a rating curve developed from previous studies on this stream by the Tennessee Valley Authority (Reference 6).

Water-surface elevations for the streams studied in detail were computed using the HEC-2 computer program (Reference 7).

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals. In cases where the 50- and 100-year flood elevations are close together, due to limitations of the profile scale, only the 100-year profile has been shown.

The hydraulic analyses for this study are based on the effects of unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the NGVD. Elevation reference marks used in this study are shown on the map and described in the exhibit labeled Elevation Reference Marks.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages State and local governments to adopt sound floodplain management programs. Therefore, each Flood Insurance Study provides 100-year flood elevations and delineations of the 100- and 500-year floodplain boundaries and 100-year floodway to assist communities in developing floodplain management measures.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:24000 with a contour interval of 20 feet (Reference 8).

The 100- and 500-year floodplain boundaries are shown on the Flood Insurance Rate Map. On this map, the 100-year floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, AH, AO, A99, V, and VE) and the 500-year floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 100- and 500-year floodplain boundaries are close together, only the 100-year floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 100-year floodplain boundary was delineated using the Flood Hazard Boundary Map for Dade County, Georgia (Reference 9) and the Flood Insurance Study for the City of Trenton (Reference 1).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be

adopted directly or that can be used as a basis for additional floodway studies.

The floodways for this study were designed for optimum benefit to the community. Floodway analyses were based on equal conveyance reduction and adjusted as necessary to account for the effects of existing development and to provide functional and manageable floodways. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections and are shown in Table 3, Floodway Data. The computed floodways are shown on the Flood Insurance Rate Map. In cases where the floodway and the 100-year floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

The area between the floodway and the 100-year floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 2.

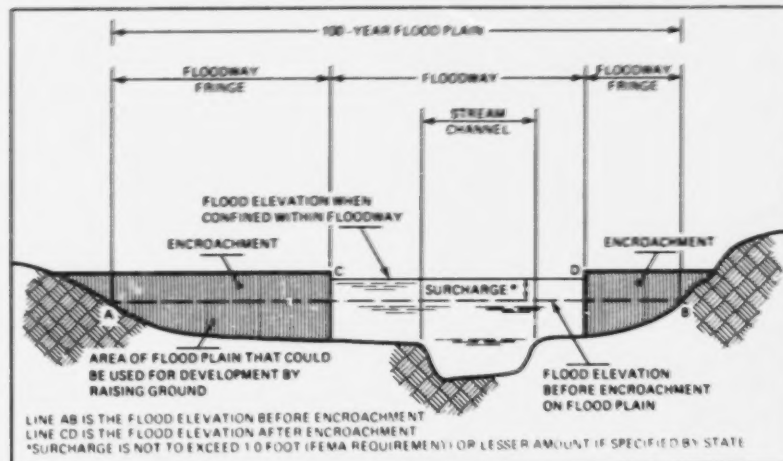


FIGURE 2 - Floodway Schematic

5.0 INSURANCE APPLICATION

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
POPE CREEK								
A	1.28	195	766	3.6	679.8	679.8	679.9	0.1
B	2.03	70	375	6.7	698.0	698.0	699.0	1.0
C	3.72	20	229	4.5	786.6	786.6	786.9	0.3
TOWN CREEK								
A	0.07	150	417	4.1	701.5	699.4 ²	700.4	1.0
B	0.28	100	511	2.6	701.5	701.2 ²	702.2	1.0
C	0.42	30	115	11.3	706.2	706.2	706.2	0.0
D	0.58	45	264	4.8	710.9	710.9	711.8	0.9
E	1.18	50	172	6.5	727.6	727.6	727.7	0.1
F	1.32	40	257	4.3	730.5	730.5	731.4	0.9
G	1.55	35	112	9.3	738.2	738.2	738.6	0.4
TRIBUTARY NO. 1								
A	0.20	25	133	6.0	696.0	691.7 ²	692.4	0.7
B	0.50	25	131	5.6	699.8	699.8	700.7	0.9
C	0.98	24	82	6.1	729.4	729.4	729.4	0.0
D	1.26	20	57	7.4	752.9	752.9	753.5	0.6

¹MILES ABOVE MOUTH

²ELEVATION WITHOUT CONSIDERING BACKWATER EFFECT FROM LOOKOUT CREEK

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

FLOODWAY DATA

POPE CREEK—TOWN CREEK—TRIBUTARY NO. 1

10

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE'	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
LOOKOUT CREEK								
A	18.91	470	5075	3.1	696.0	696.0	696.9	0.9
B	19.35	500	3029	4.6	698.0	698.0	699.0	1.0
C	19.94	658	2914	4.5	701.9	701.9	702.9	1.0
D	20.43	365	2720	4.3	709.1	709.1	710.0	0.9
E	20.94	220	1489	5.7	712.8	712.8	713.6	0.8

'MILES ABOVE MOUTH

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

**DADE COUNTY, GA
AND INCORPORATED AREAS**

FLOODWAY DATA

LOOKOUT CREEK

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 100-year floodplain, areas of 100-year flooding where average depths are less than 1 foot, areas of 100-year flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 100-year floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols the 100- and 500-year floodplains, the floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The current Flood Insurance Rate Map presents flooding information for the geographic area of Dade County. Previously, separate Flood Hazard Boundary Maps and/or Flood Insurance Rate Maps were prepared for each floodprone incorporated community and the unincorporated areas of the county. Historical data relating to the maps prepared for each community are presented in Table 4, Community Map History.

7.0 OTHER STUDIES

Flood Insurance Studies published for Marion County, Tennessee; Walker County, Georgia; and Jackson County, Alabama (References 5, 10, and 11) are in agreement with this study.

The Flood Insurance Study for Hamilton County, Tennessee (Reference 12) is now being revised and is in agreement with this study.

This Flood Insurance Study supersedes the previously printed Flood Hazard Boundary Map for Dade County, Georgia (Reference 9) and the previously published Flood Insurance Study for the City of Trenton, Georgia (Reference 1).

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
TRENTON, CITY OF UNINCORPORATED AREAS	MARCH 8, 1974 JUNE 10, 1977	JULY 23, 1976 JULY 28, 1978	SEPTEMBER 28, 1979 MAY 17, 1989	

TABLE 4

FEDERAL EMERGENCY MANAGEMENT AGENCY

**DADE COUNTY, GA
AND INCORPORATED AREAS**

COMMUNITY MAP HISTORY

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, FEMA, 1371 Peachtree Street, NE., Suite 736, Atlanta, Georgia 30309.

9.0 REFERENCES AND BIBLIOGRAPHY

1. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Insurance Study, City of Trenton, Dade County, Georgia, September 1979.
2. Tennessee Valley Authority, Floods on Pope and Town Creeks and Tributary #1 to Lookout Creek at Mile 18.91 in Dade County and Trenton, Georgia, Knoxville, Tennessee, October 1985.
3. U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, Number of Inhabitants, Georgia, Washington, D.C., January 1982.
4. U.S. Department of the Interior, Geological Survey, Interagency Advisory Committee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee, Bulletin No. 17B, Guidelines for Determining Flood Flow Frequency, September 1981, revised March 1982.
5. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Marion County, Unincorporated Areas, Tennessee, May 1980.
6. Tennessee Valley Authority, Floods on Lookout Creek in the Vicinity of Trenton, Georgia, Special Report, September 1969.
7. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles, Generalized Computer Program, Davis, California, April 1984.
8. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 20 Feet: Durham, Georgia, 1946, photorevised 1969; Trenton, Georgia-Alabama, 1946, photorevised 1972; New Home, Georgia-Alabama, Tennessee, 1970; Hooker, Georgia-Tennessee, 1970.
9. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, Dade County, Unincorporated Areas, Georgia, July 1978.
10. Federal Emergency Management Agency, Flood Insurance Study, Walker County, Unincorporated Areas, Georgia, November 1983.

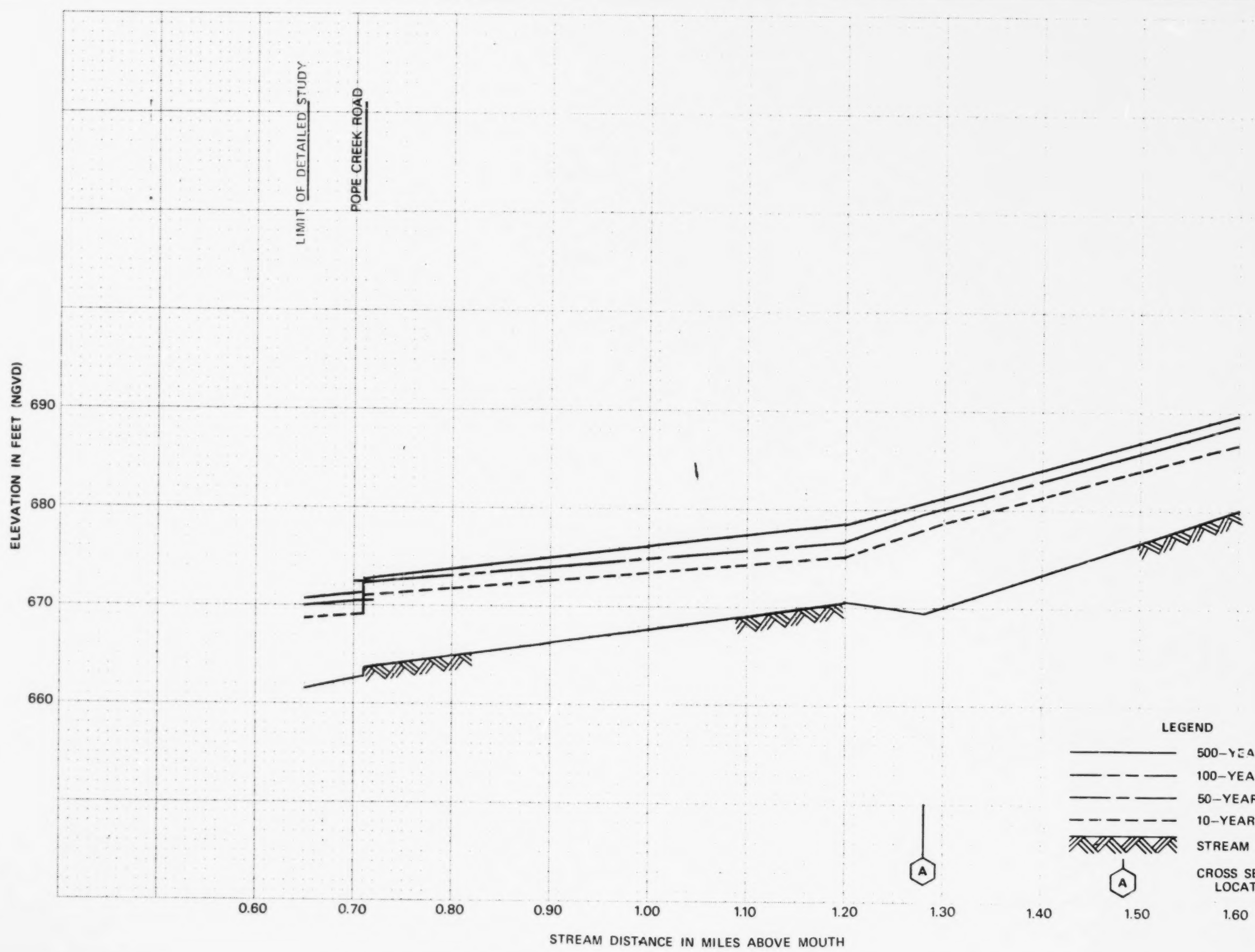
11. U.S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Insurance Study, Jackson County, Unincorporated Areas, Alabama, April 1978.
12. Federal Emergency Management Agency, Flood Insurance Study, Hamilton County, Unincorporated Areas, Tennessee, August 1982, revision in progress.

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
1	0014	725.19	standard disk in center of south end of west abutment of Norfolk Southern Railway at intersection of Norfolk Southern Railway and LaFayette Street
2	0014	720.9	chiseled square on upstream corner of concrete pier at Price Street on Town Creek
3	0014	734.3	chiseled square on downstream headwall of culvert for Town Creek under northbound Interstate 59
4	0014	737.2	chiseled square on northwest headwall of box culvert for Town Creek under southbound Interstate 59
5	0014	748.3	chiseled square on right headwall of Pace Drive bridge over Town Creek
6	0009	669.1	chiseled square on northeast headwall of culvert for Pope Creek under Creek Road
7	0009	671.8	chiseled square on southeast headwall of culvert for Pope Creek under Pope Creek Road
8	0007	693.0	chiseled square on northeast walkway on U.S. Route 11 bridge over Pope Creek, 2 feet above road
9	0007	732.2	chiseled square on southeast side of eastbound Interstate 24 bridge over Pope Creek
10	0006	744.9	chiseled square on east corner of southeast wingwall of south headwall of culvert for Pope Creek under westbound Interstate 24
11	0006	900.5	chiseled square 8 feet from right edge of downstream headwall of culvert for Pope Creek under State Route 299

ELEVATION REFERENCE MARKS

<u>REFERENCE MARK</u>	<u>FLOOD INSURANCE RATE MAP PANEL</u>	<u>ELEVATION (FEET NGVD)</u>	<u>DESCRIPTION OF LOCATION</u>
12	0012	734.0	chiseled square on upstream headwall of culvert for Tributary No. 1 under U.S. Route 11
13	0012	736.8	chiseled square on upstream headwall of culvert for Tributary No. 1 located about 425 feet southwest of intersection of Barton Avenue and Scenic Drive



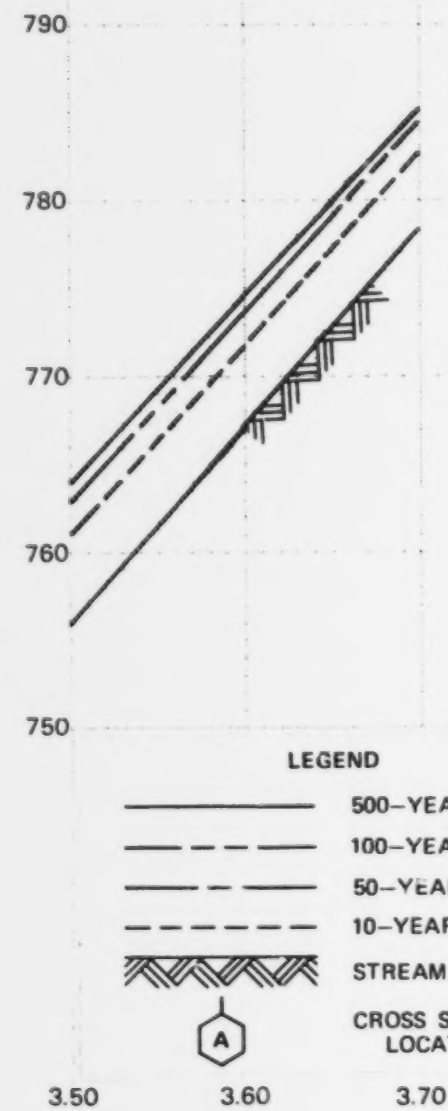
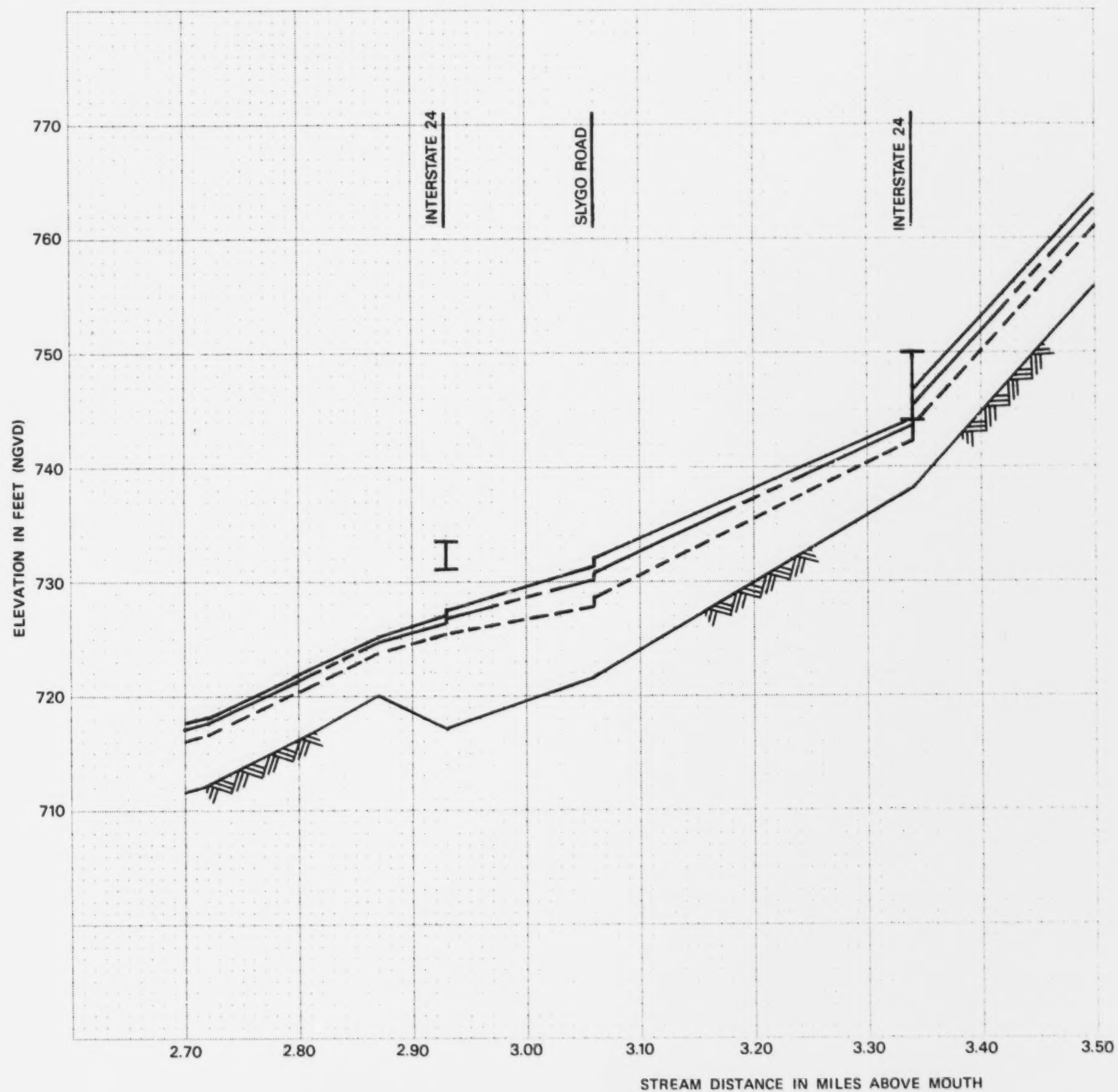
FLOOD PROFILES

POPE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

01P



- LEGEND**
- 500-YEAR FLOOD
 - - - - 100-YEAR FLOOD
 - . - . 50-YEAR FLOOD
 - - - - 10-YEAR FLOOD
 - ////// STREAM BED
 - A CROSS SECTION LOCATION

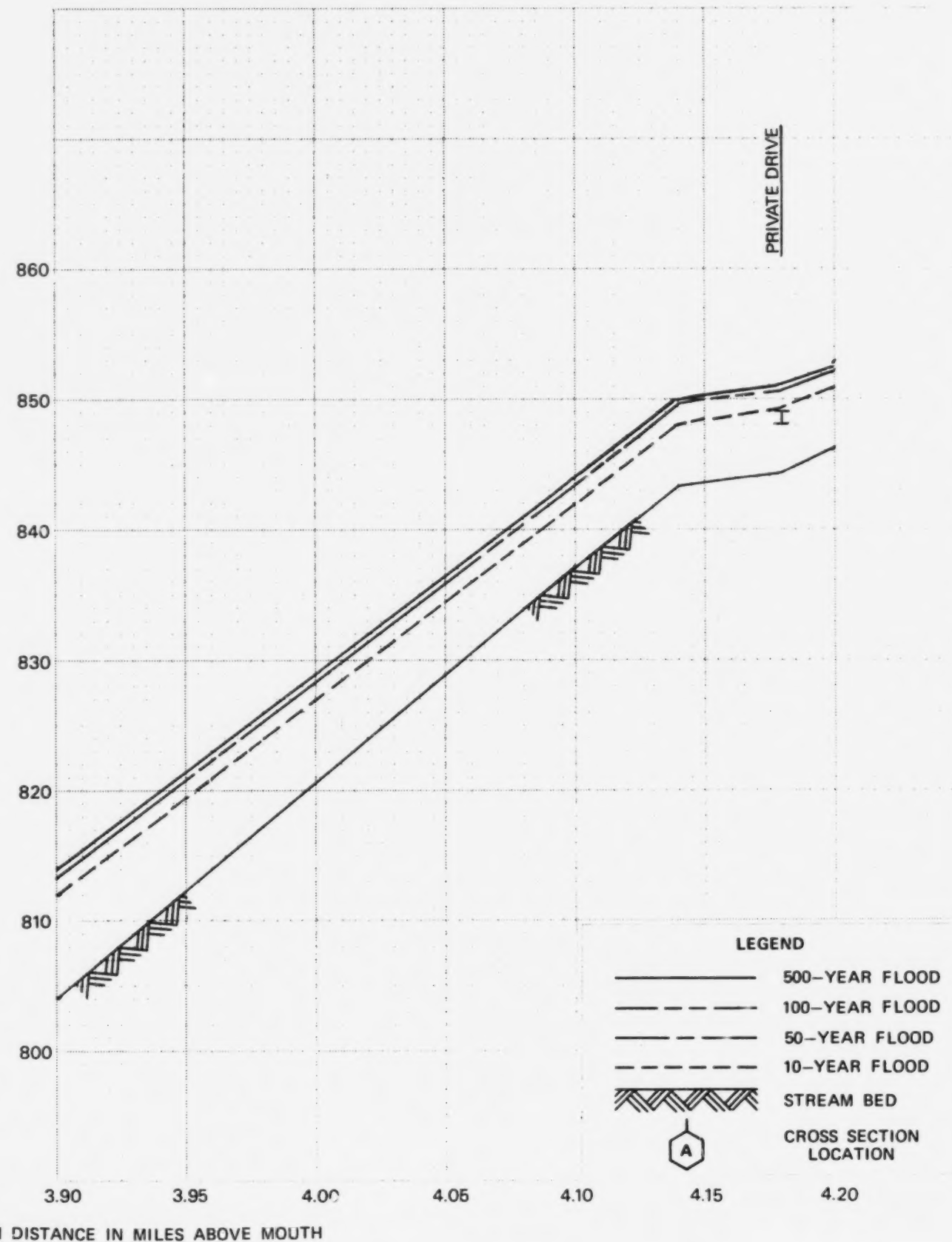
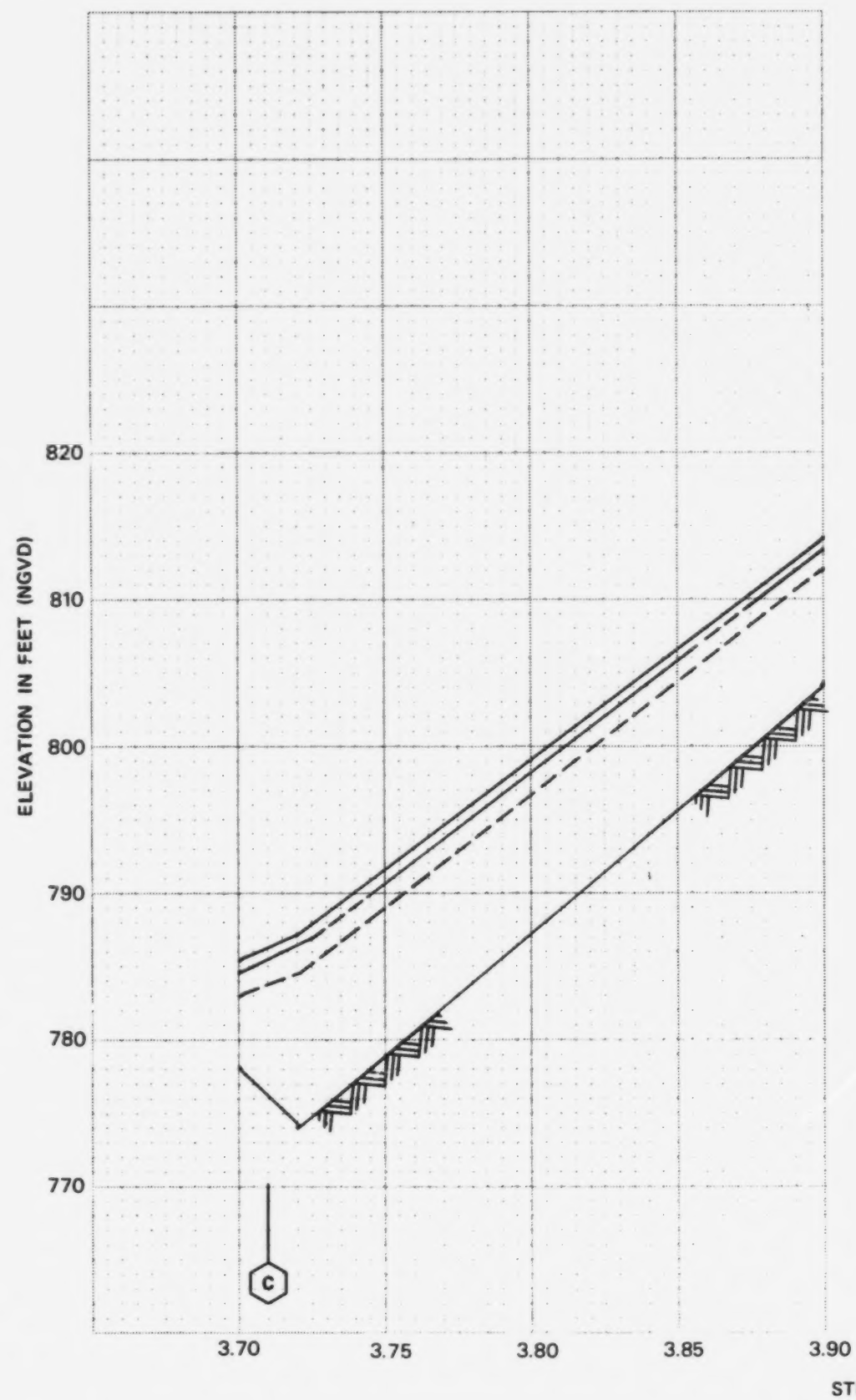
FLOOD PROFILES

POPE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

03P



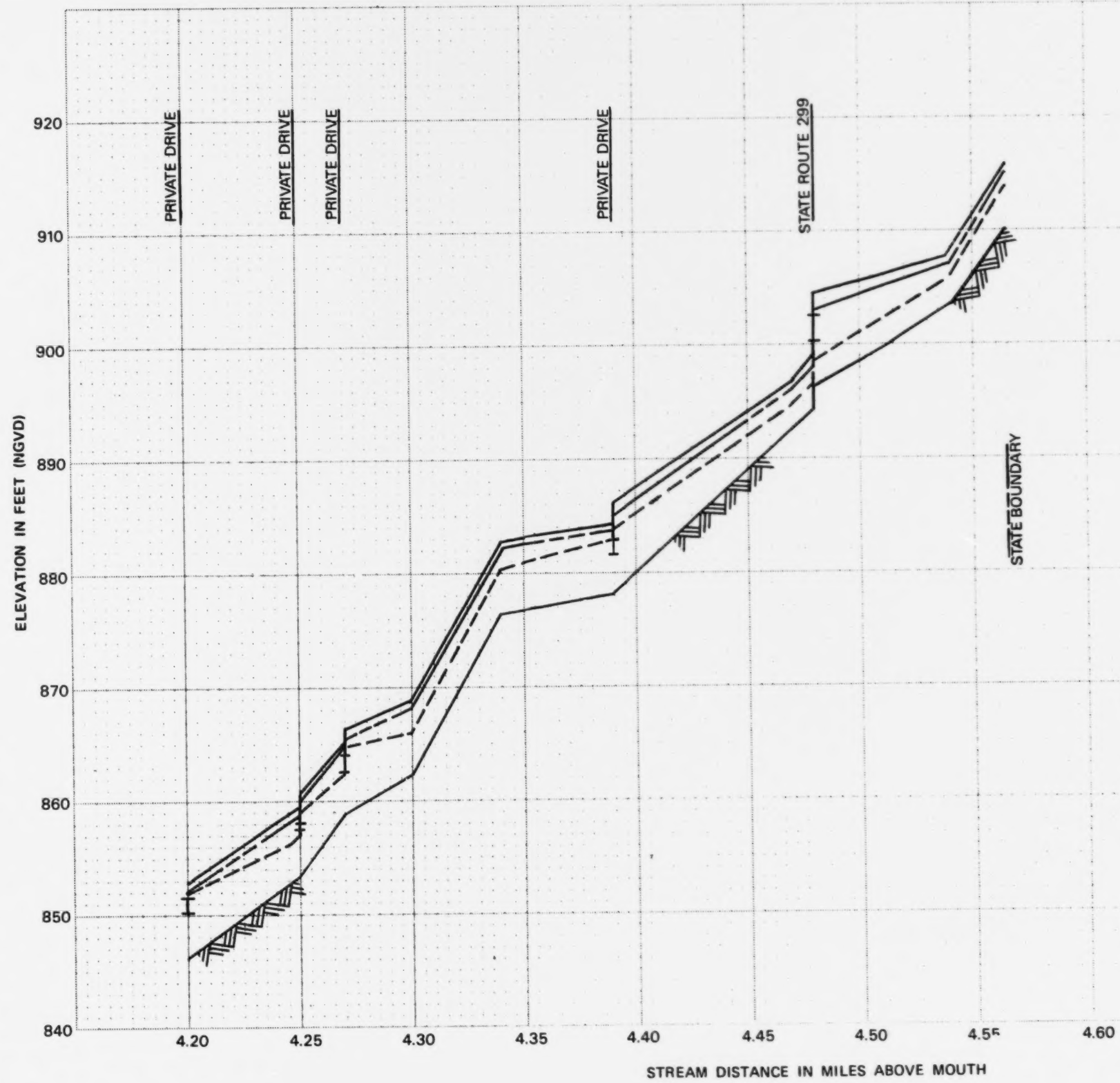
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POPE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

**DADE COUNTY, GA
AND INCORPORATED AREAS**

04P



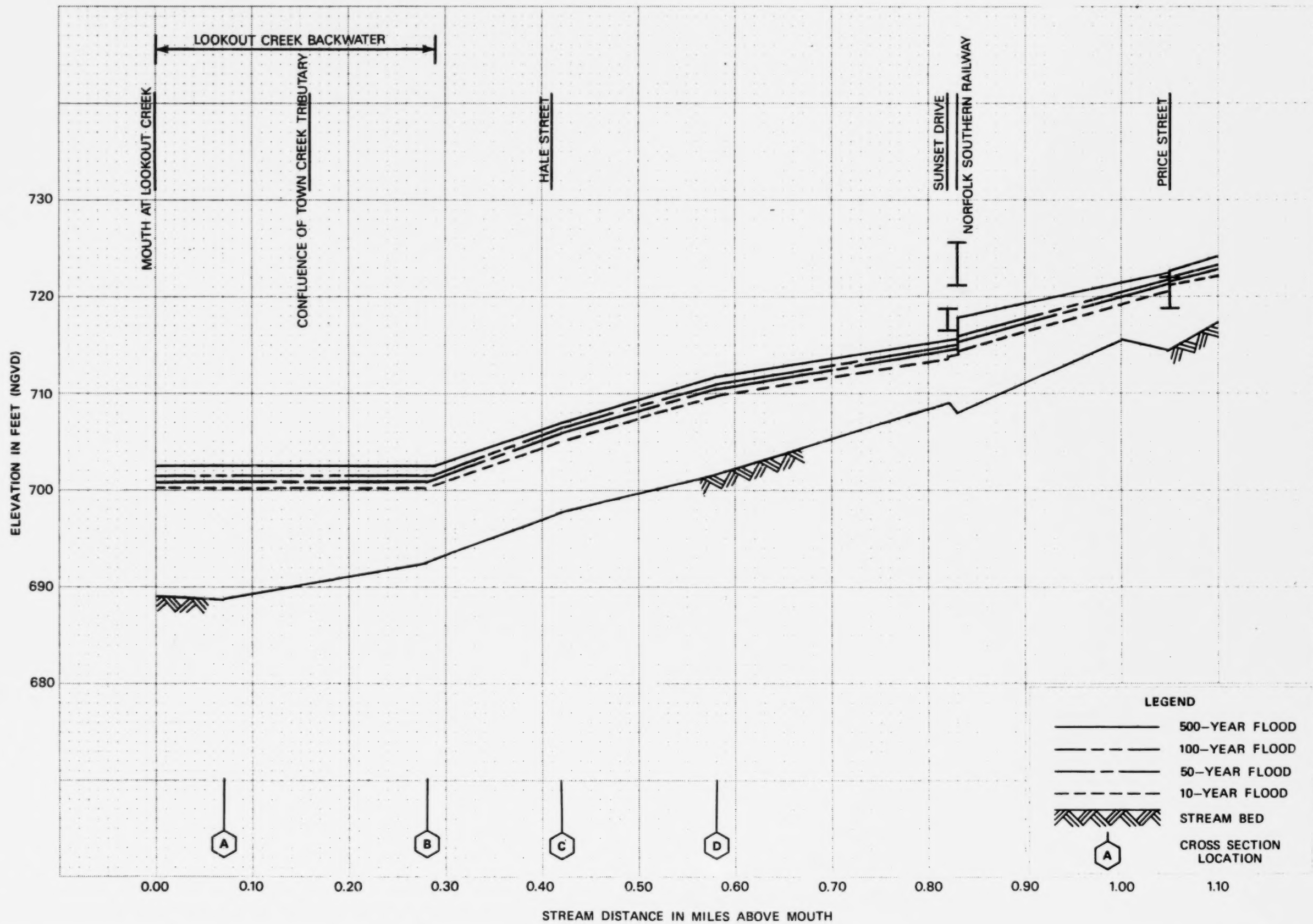
FLOOD PROFILES

POPE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
DADE COUNTY, GA
AND INCORPORATED AREAS

05P

20

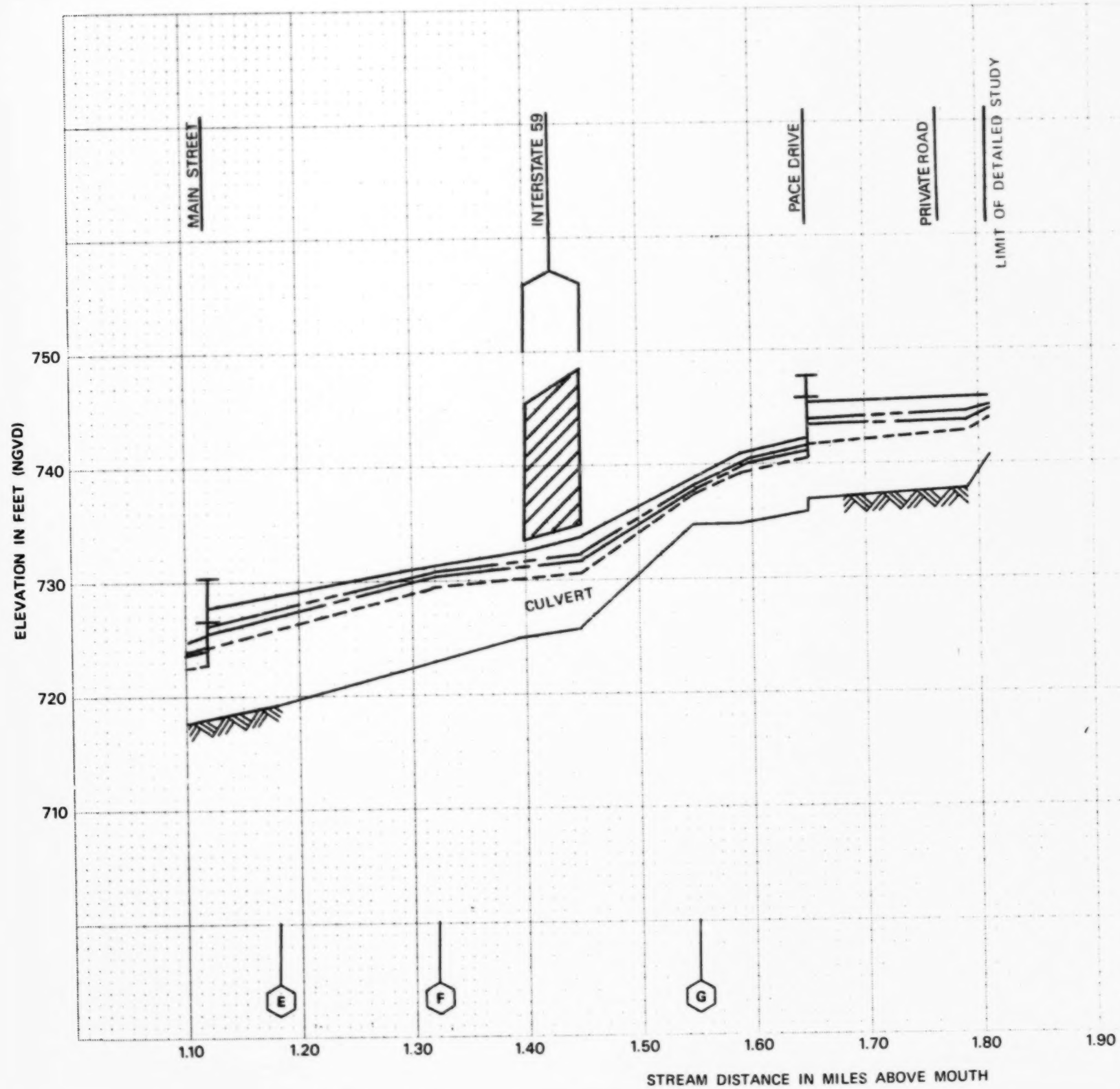


FLOOD PROFILES

TOWN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
DADE COUNTY, GA
AND INCORPORATED AREAS

06P



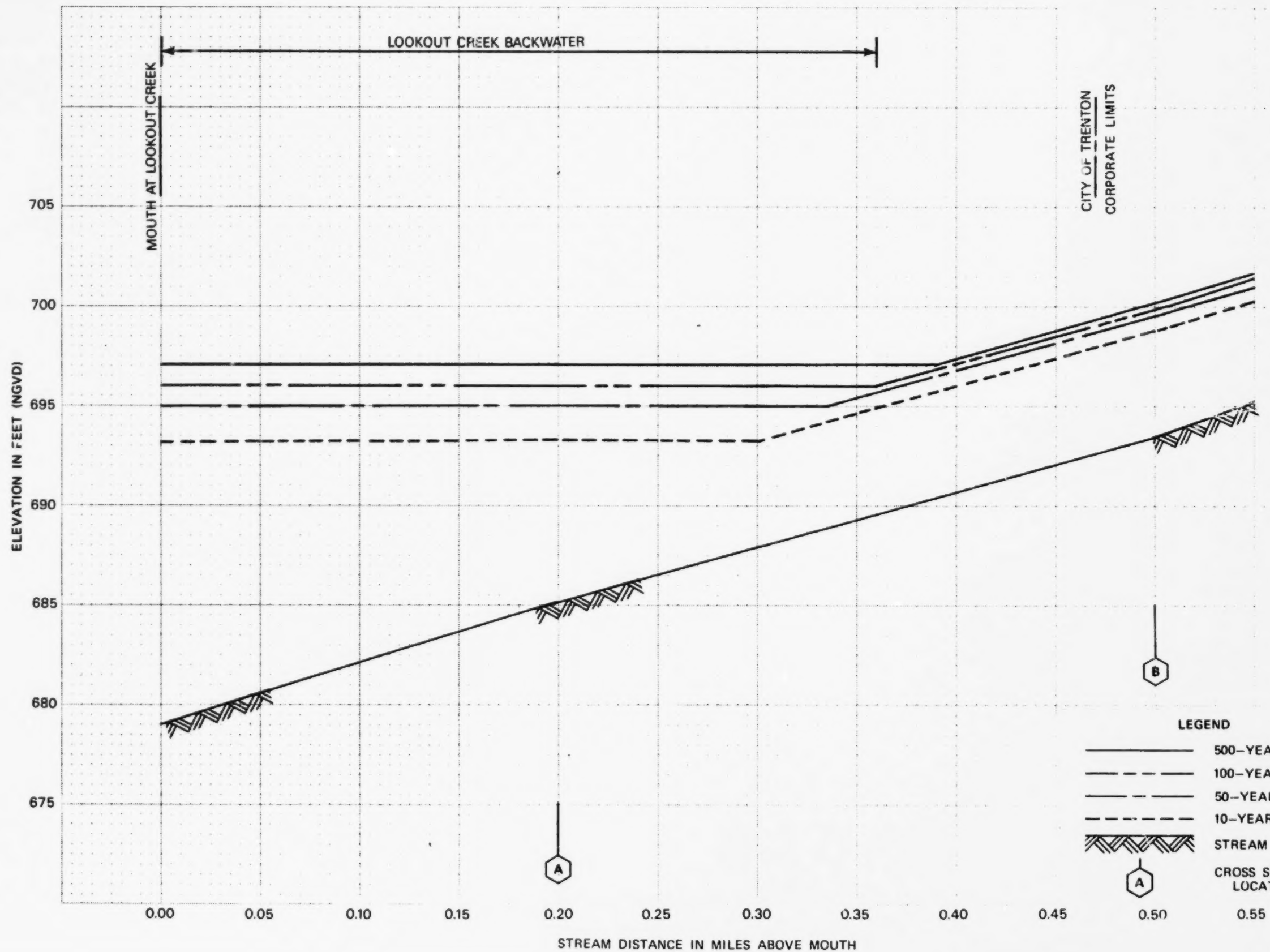
FLOOD PROFILES

TOWN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

07P



FLOOD PROFILES

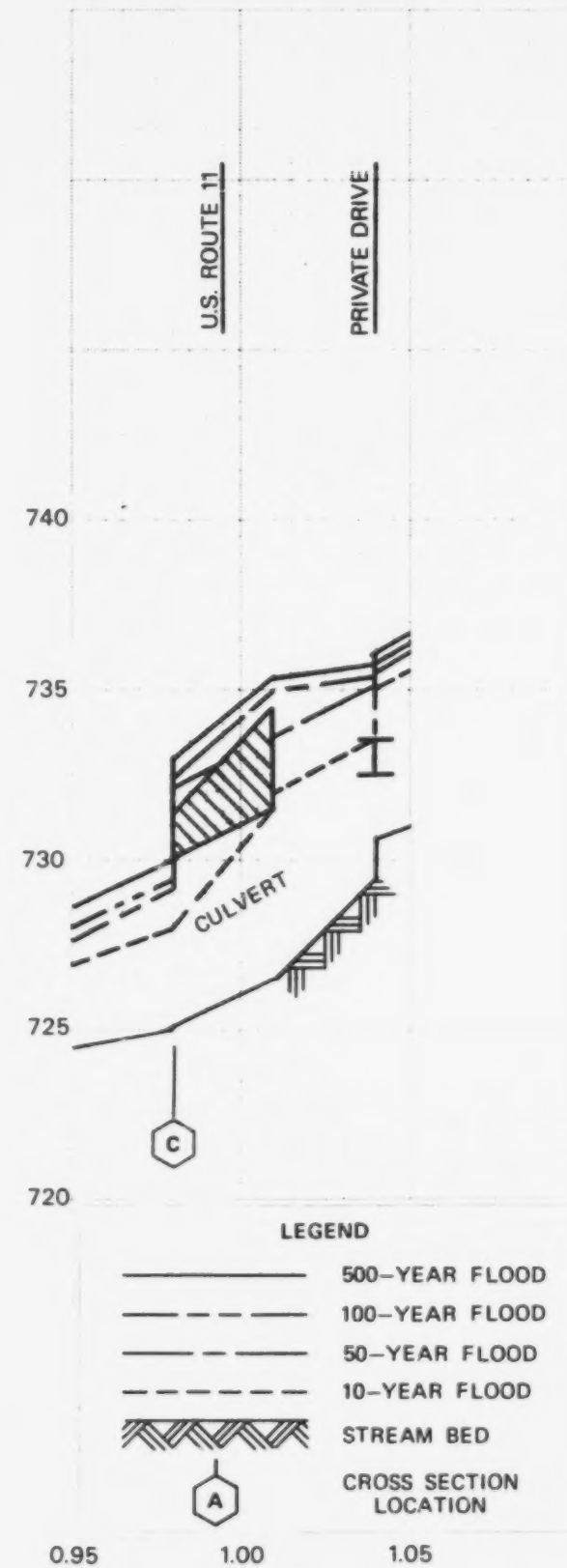
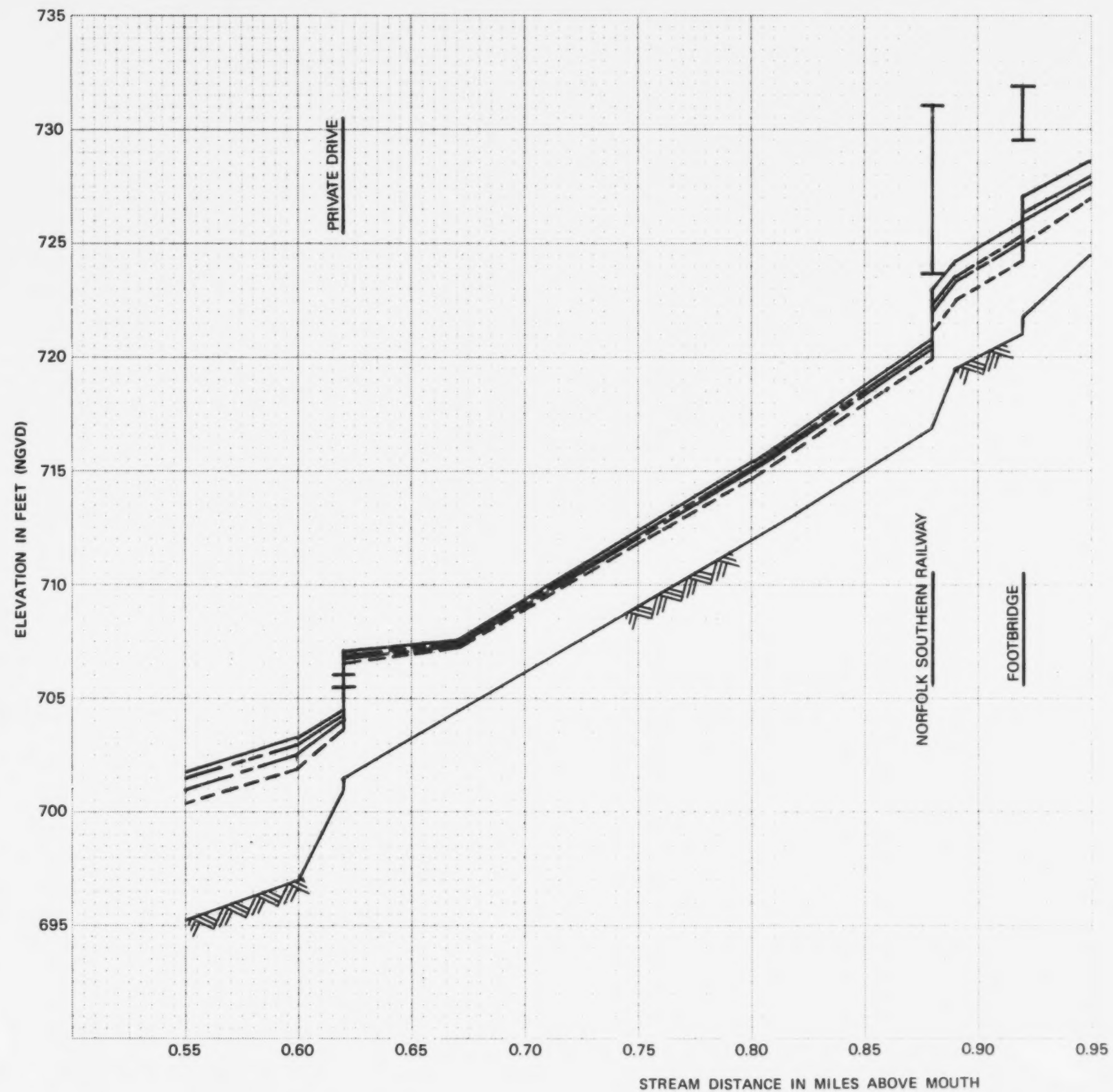
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FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

08P

25



FLOOD PROFILES

TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

09P

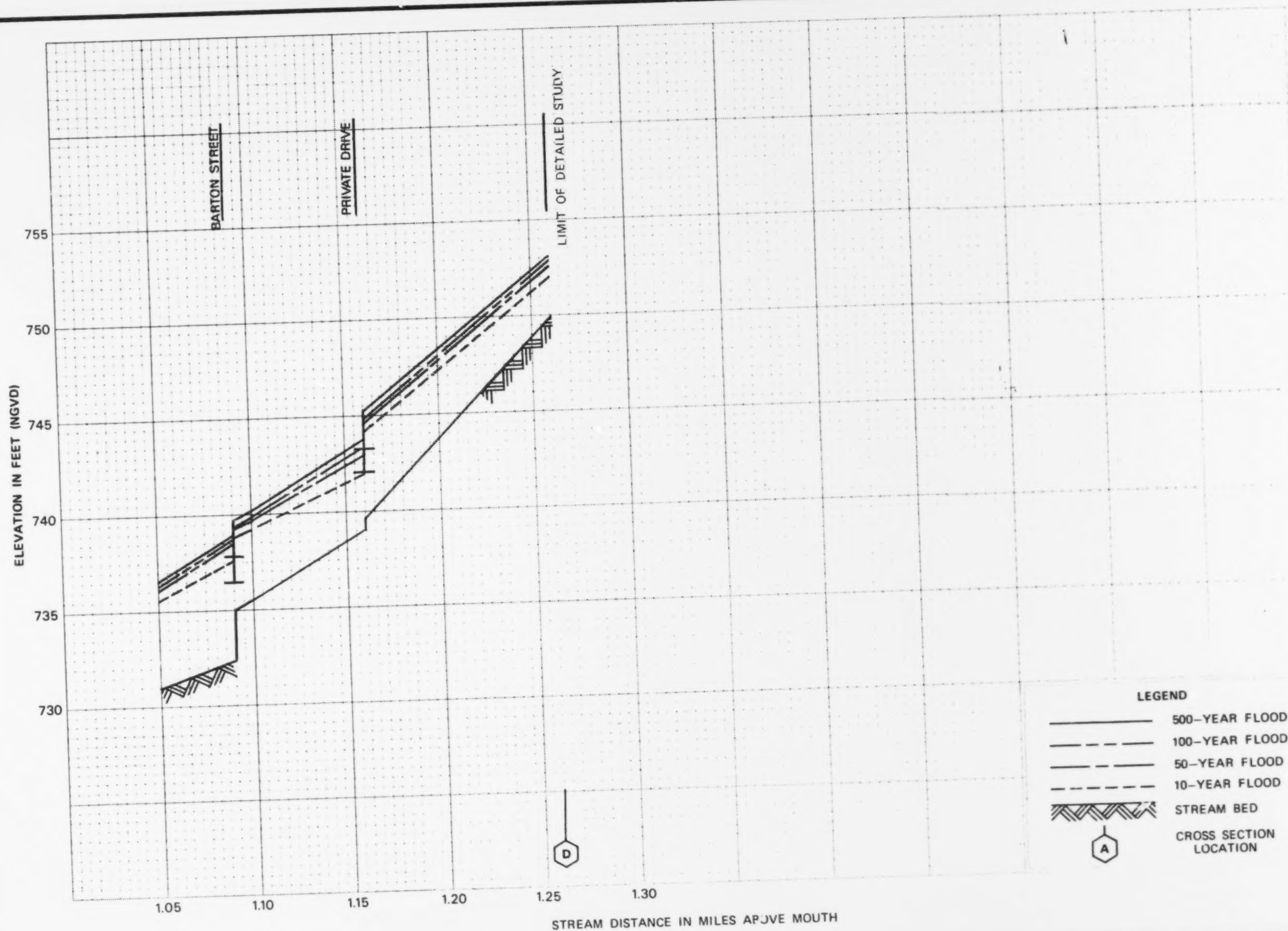
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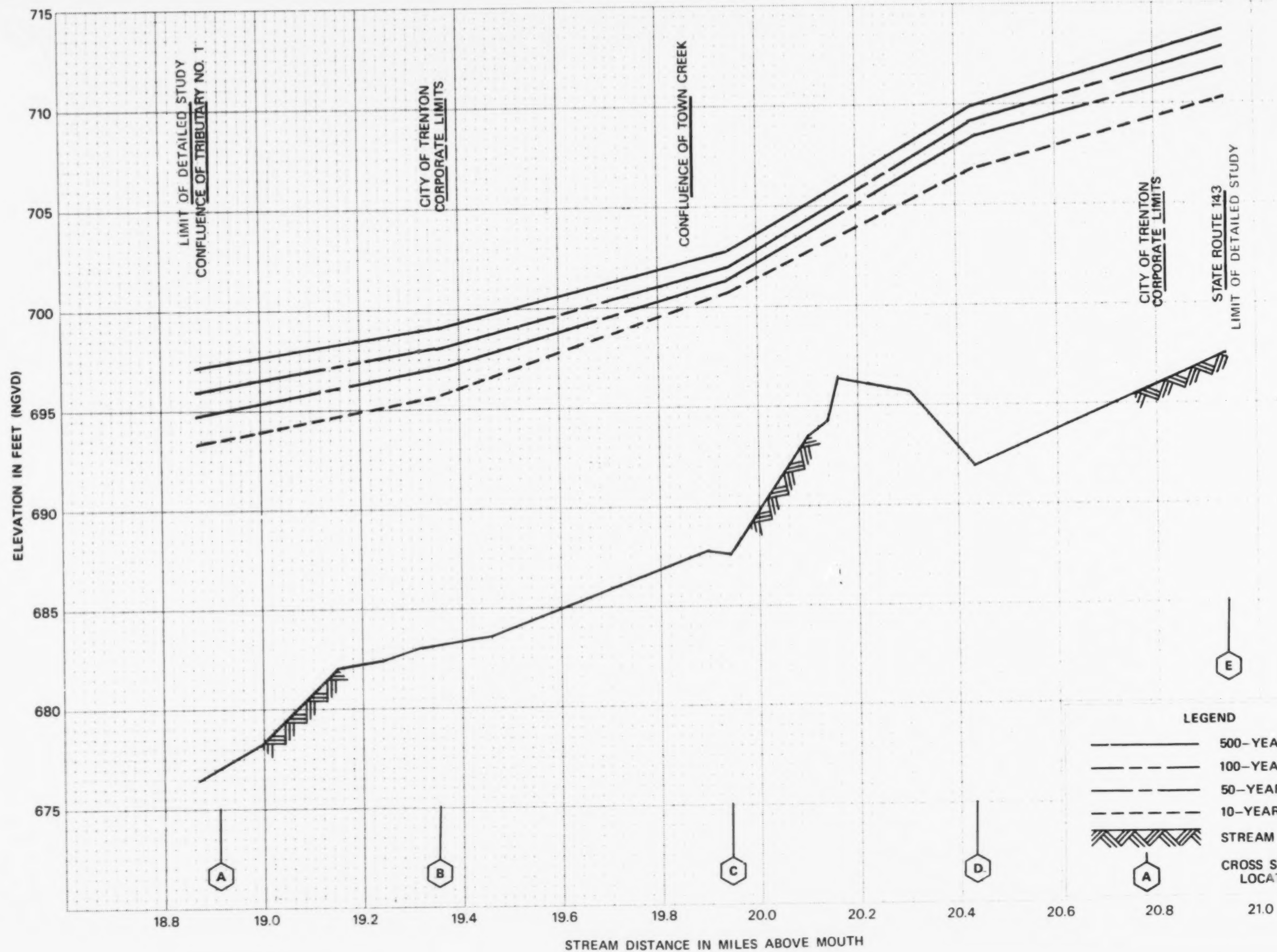
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FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

10P





FLOOD PROFILES

LOOKOUT CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DADE COUNTY, GA
AND INCORPORATED AREAS

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